



PERGAMON

Habitat International 24 (2000) 455–473

**HABITAT**  
INTERNATIONAL

[www.elsevier.com/locate/habitatint](http://www.elsevier.com/locate/habitatint)

# The architectural form and landscape as a harmonic entity in the vernacular settlements of Southwestern Saudi Arabia

Mohammed Abdullah Eben Saleh\*

*College of Architecture and Planning, King Saud University, P.O. Box 57448, Riyadh 11574, Saudi Arabia*

---

## Abstract

The paper aims to describe the architectural form and landscape as a harmonic entity in vernacular settlements of southwestern Saudi Arabia. The qualities of vernacular settlements and their integration and responsiveness to the physical, social, economic and cultural environment are demonstrated in this study. The socio-economic activities and customs in southwestern Saudi Arabia are presented as part of the historical process. The paper looks at the major elements of the vernacular villages and landscape as cultural-specific images. While appreciating this, the author laments the way this harmony has been disrupted not least aesthetically as a consequence of modernism which had an impetus on changing life style and social expectation. The cultural-specific images involve direct relationships between the architectural and urban forms as systems and events that are taking place in or around that form. One thesis is that each element of the vernacular village and landscape is linked to an image that shapes and influences human behavior and appreciation, thereby helping to shape larger environmental patterns. Beyond the meaning that specific elements inherit, they have functional and economic values. As a result, their visual qualities are believed to be effective in enhancing behavior through their visual attributes. One of the most important conclusions is that, there are many features of modern village extensions and landscape elements that enhance the interaction with the physical environment that ordinary citizens value, and there are elements of the vernacular villages and landscape that people regret to lose, such as ‘qasabahs’, weekly markets, cultivation of terraces, etc. This is in spite of today’s, modern planning and design techniques that are being sought to produce new architectural forms and landscape elements. Any attempt to substitute vernacular forms without taking into account the values that the older forms held is considered a failure of adopted modernist attitudes. © 2000 Elsevier Science Ltd. All rights reserved.

*Keywords:* Vernacular landscape; Urban form; Architectural design; Saudi Arabia

---

---

\* Tel.: + 966-1-467-7140; fax: + 966-1-467-5775.

## 1. Introduction

In many parts of the world the loss of vernacular elements in the physical environment, and their replacement by exotic imported types not always in harmony with the culture of those societies, has happened too often, and little attention has been paid to the subject. At the outset there are those certain inherent qualities in vernacular architectural forms and landscape which have been present in the culture for a long time. Certain formal qualities derived from simple numerical relations based on the human figure and celestial bodies produce a cultural symbolism which has only recently been discarded (Pocock & Hudson, 1978). The vernacular environment, at any point in time, is as much a part of cultural heritage as is art, literature and music. At the same time, just as new art forms are developing, so are new architectural forms and landscape. The loss of vernacular forms is not only a cultural loss, but also has adverse and often irreversible effect on the way of life of the society concerned. If societies are to preserve parts of the vernacular environment and adapt them to conform with the more positive aspects of modern life, the end result should not be to produce a 'museum in the open' for the sake of visitors, but to preserve the integrity and values of the community itself and upgrading facilities to comply with modern standards. The reduction of importance of cultural specific architectural forms and landscape is substituted by modern planners and designers by beautification objects which began to dominate the open spaces and roads of modern urban developments. This is a characteristic of the modern tradition and especially the deterioration and virtual disappearance of the public domain (Curran, 1983).

Saudi settlements pulsate with history and traditions nurtured by many years of communal living against a backdrop of a harsh life. The vernacular environment of southwestern Saudi Arabia is characterized by prominent architectural forms and landscape of an archetypal nature which were built for highly practical purposes. These forms are associated by behavioral activities of context-specific nature observed in weekly markets, warning and defense towers, fortified houses, agricultural fields and forests. Their architectonic forms create harmonic entity associated with distinctive human activities and interaction patterns. The interaction between humans and their environment has been well recognized by professionals (Al-Soliman, 1990).

Unfortunately, newly introduced architectural forms and landscape has often happened at the expense of what already exists. Professionals tend to regard the existing vernacular environment and landscape as expendable in favor of the new, irrespective of its value, character and of what they represent. An emphasis is concentrated on the product rather than on historical continuity. This tendency is regrettable because creative effort can connect the new to the old. The process involves renewal of old forms, a transformation of the known or an invention of a new. It is part of the knowledge that eventually all things must change and allow individuals to participate in the making of meaningful forms. For example, vernacular forms were in continuous piecemeal transformation under the initiative of those who actually occupied, controlled and used the form, whereas modern forms are often designed by professionals from outside the culture.

In this regard, the fate of vernacular features in settlements and landscape is gloomy. The new architectural forms in Saudi Arabia have uprooted the usage of some vernacular forms such as warning and defense towers and weekly markets which once possessed significance in function. When these structures lost their principal function, people were not ready to maintain them. As a result, most of these structures were destroyed and the few that remain are often left unused. So far, new construction which honors traditional physical forms has largely been limited to fake

character minarets and beautification objects. The new structures are made of concrete and steel and have taken forms that are often not indicative of the culture of the Arabian Peninsula. These new elements lack designs of symbolic importance in relation to the place and space, and so weaken the interaction between the structure and the environment.

There is a great need to revive interest in Southwestern Saudi Arabian vernacular elements and in the images they hold. The restoration of such elements and the construction of new elements that accurately reflect the country's rich heritage is called for. This paper attempts to show how are vital some vernacular forms which link people to the environment through their symbolic, social, ritual and practical functions.

## **2. Purpose of the study**

The thrust of this paper is three fold: (1) to present an array of architectural forms and landscape elements that enhance the interaction between the viewer and the physical environment; (2) to explore how vernacular design elements can be incorporated into modern solutions which can determine a cognitive image of a newly planned environment; and (3) to address the issue of meaning and how its use can enhance modern designs. A set of examples is provided which is intended to enrich the argumentation about the cognitive image derived from vernacular solutions.

## **3. Research methodology**

Concerning the relationship between architecture and urban context there are two broad areas of interest: on the one hand there is an approach which gives priority to cultural continuity with the existing physical environment and its history, a process which emphasizes the linkage with urban identity, local memory and the image of the place; and on the other, a method concerned with morphological continuity with the existing environment and its historical stratification, a system which seeks links with physical features, the geographic site, topographic characteristics and the physical and morphological patterns of the physical environment.

The multiplicity of relevant variables, as well as the complex nature of causation, demands refining the method of research.

The approach adopted depended on extensive architectural survey which required quick evaluation of how certain architectural forms and landscape elements enhance the definition of the environment. The answer to the question forces the survey to look beyond stylistic preferences and prejudices inherited in the surveyed architectural and landscape forms. An analysis of behavioral and aesthetic principles can be used as a way of exploring how certain physical forms related to a particular domain.

## **4. Historical background**

Over the past four decades, the vernacular environment in Saudi Arabia witnessed phenomenal change and reconstruction as a result of rapid urban growth and modernization stimulated by oil

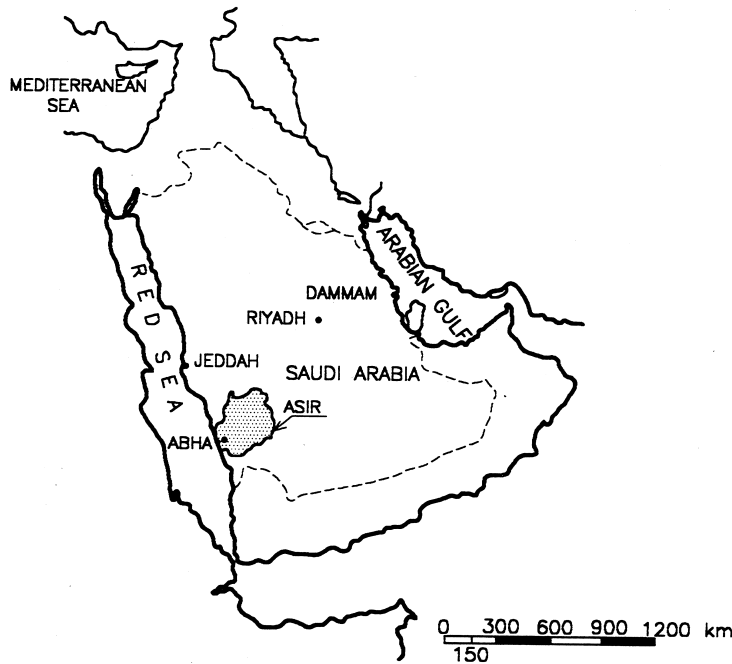


Fig. 1. Map of Saudi Arabia shows the Southwestern part of Saudi Arabia.

wealth and demographic growth (Figs. 1 and 2). Today, Saudi physical environments are often characterized by harsh visual contrasts between physical structures and their settings. In the past, the architectural forms were obvious in the materials, the construction methods, and the vernacular features they constitute as a whole (Fig. 3). The vernacular landscape was part of the whole and maintained by the conservatory norms among indigenous dwellers. Both the architectural forms and landscape did not only have practical value, but authentically conveyed the indigenous architecture and its culture; in other words, it was a distinctive urban fabric woven by tradition. Wood (1978) notes that in the past, as in the modern times, ideas and techniques had their origins, were developed to a peak, and slowly declined as they lost relevance for the society which created them.

Many key features in the vernacular settlements of Southwestern Saudi Arabia could be observed. Physical features such as mountains, valleys, plains and forests acted as markers that guided indigenous dwellers in tracking destinations. Other built features like defense towers, minarets, physical structures in open agricultural fields like qasabahs, weekly markets, roads, etc. distinguish each settlement from others.

The unification of Saudi Arabia in 1932 provided continuous inter-regional communications which admitted several physical changes to the environment. New physical structures emerged such as minarets which started to dominate the skylines of traditional settlements, replacing Qasabahs which experienced a deactivated function. The remaining warning and defense towers in traditional settlements served as grain storage places and diminished in numbers. The minarets emerged as ritual and identification landmarks for mosques (Fig. 4).

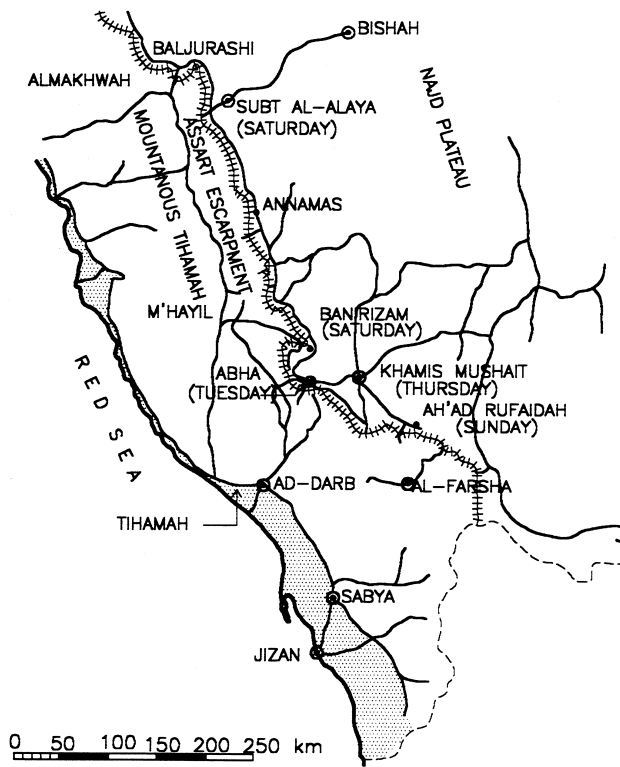


Fig. 2. Scheme of geographical zones of Southwestern part of Saudi Arabia with locations of some weekly markets.



Fig. 3. Border markers between neighbors or between the individuals and public involve the definition of the territory as a domain between two neighboring entities.



Fig. 4. The minaret acts as a sacred space approach. The boundary of the mosque distinguishes between two environments: Permissible and taboo. Upon entry of the sacred space certain behavior is required.



Fig. 5. The transformation in forest management affiliation implied the erection of warning and signage system to legalize the prohibition of environmental encroachment.

The architectural forms and landscape elements were planned as a design language and subjected to modification by community residents, and were suited to their values, social norms, and needs. The people attributed names to the physical features of the environment by names which by time, denoted their identity (Fig. 5). The participation of the decision maker, master

builder and user in the construction of the physical structures contributed to the creation of a meaningful built environment.

### 5. The interaction between users and artefacts: an image of behavior

The paper argues that in the highlands of Southwestern Saudi Arabia, historic structures like markers and towers once helped residents to give definition to the environment, resulting in a vivid interaction between the inhabitants as users and the built environment as a setting (Figs. 6 and 7). It is only through awareness of inherited cultural values, environmental conditions, and an understanding of ritual protocols, that it is possible to design a modern physical environment that has the same sense of local authenticity (Fig. 8). Along with rapid growth and modernization that took place recently in most settlements, there has been a great loss of traditional identity in the built environment.

The modern approaches in planning and design of settlements' growth seems to be based on theoretical and authoritative grounds (Fig. 9). It represents perspectives and attitudes that are based entirely on designers, clients and decision makers perceptions and value preferences. While some of these professionals try to incorporate older images of traditional physical artefacts, they do not base them on the same type of spontaneity which created the traditional symbols (Fig. 10). The symbols that people choose to have around them may reflect their perceptions of who they are or may reflect their perceptions of who they aspire to be or may simply reflect a rejection of the past (Lang, 1988). Traditional or modern artefacts incorporate common perspectives practiced in



Fig. 6. Tribal territories were conventionally defined by Al-Rahwah Qasbah.



Fig. 7. Inter-tribal raiding necessitated the erection of *qasabah* or *husn* which served as warning and defense towers.

everyday experiences of inhabitants who actually live in and use the environment. The artefacts express social relationships, climatic adaption, spatial organization, and possess aesthetic richness.

Throughout the world orientation patterns to sacred or prophane places vary widely. Territorial places differ in size, form and relationship to natural surroundings. Each has its own physical characteristics, organizational rules, and associated behavior patterns. In addition, each has an image, by which people who know the place understand it. Some types of orientation patterns have images which are particularly strong and widely shared. To many people, 'city' means 'noisy', 'crowded', 'dense', and 'sophisticated'; 'country' is envisioned as 'natural', 'calm', 'isolated', and 'quiet'. These images influence reactions to both familiar and unfamiliar places.

Place images focus feelings and knowledge about them. Images represent the meaning which a place holds for the user. The meaning grows from personal experiences, preferences, and the education within a particular culture. Users build these images out of fragments of experiences selected for their significance. The experience may be a direct sensation of the place. Selected





Fig. 8. The strategic location of villages within the natural environment eliminated the necessity of walls around the settlements.

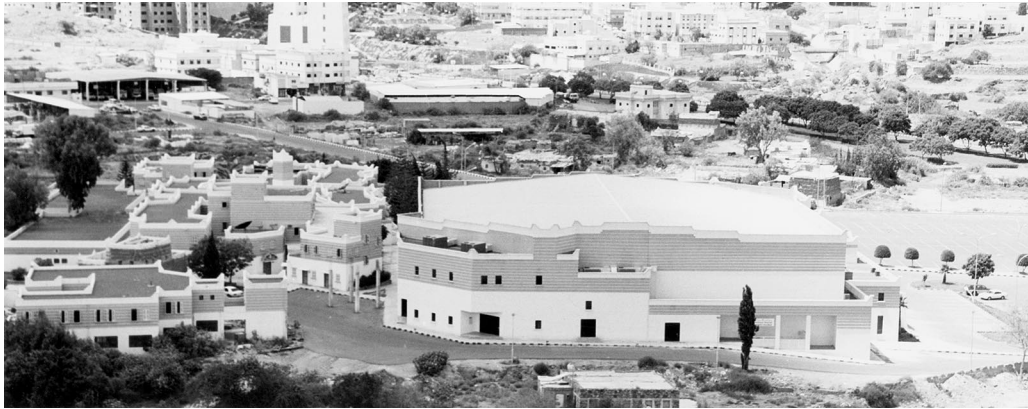


Fig. 9. Urban growth and Human activities in agricultural areas of Asir necessitates the erection of structures that serves as link between the past and present.

fragments are organized into a coherent image, which reminds the user of the place and helps him to recognize it.

Most important activities involve communicating or interacting with other people. The settings where these interactions occur have considerable impact on the quality and effectiveness of the communication. Both environmental and behavioral factors affect users' interactions.



Fig. 10. The minaret replaced Al-Qasabah; the warning and defense tower to serve as the most prominent structure that pierces the skyline of urban developments.

Although interactions vary from intimate exchanges to large public meetings, the character of the interaction depends on the relationship between the users and the nature of what they are communicating. In small groups, communication is usually two-way, with each person both sending and receiving information, while in large groups communication is predominantly one-way.

Interactions sometimes involve the exchange of physical objects. Many of these exchanges occur in settings which are specifically designed to accommodate them. Since physical settings can support or inhibit the interactions that occur there, people often gravitate unconsciously to a place that suits the way they want to interact.

The physical environment is a mix of the sacred and the profane, whereby the artefacts put the rules and codes to govern the approach and use of places as well as space. The artefacts act as signs that regulate certain aspects of behavior and protocol. Sacred spaces are either possessed by individuals or public. Private ownerships (houses, farms, shops) imply sacredness on that property while public ownerships (mosques, tombs, gender spaces) imply sacredness on entry and use. Codes of use are assigned to ensure that there is a degree of regularity and sacredness order in society. Rules establish expectations, since they indicate what actions society views as acceptable, undesirable, banned or dangerous. In sacred places, the regulations limit certain behaviors and permit other forms of pattern which reflects social and ritual values.

Sacred and profane places are defined by definite boundaries (opaque or transparent). A boundary marks the edge or outer limit of the place, physically separating and distinguishing it from its surroundings. The distinction made between inside and outside is one of the basic physical and symbolic aspects of the place. The physical boundaries are legal entities that enable users to

distinguish between the sacred and profane. The artefacts that distinguish the places associate messages, meanings, and rules with them. People mark, differentiate, and separate places to varying degrees of perception. The culture has rigid boundaries for certain spaces while flexible for others. A great range of physical manifestation can act as boundaries. Any change that allows distinction can be a boundary, even a small one such as difference of materials, a calligraphy or a line on the ground.

The approach to a place contains information people need in order to find and identify it and to anticipate what will be found within. For example, the minaret can lead to a mosque (Sacred place). The entrance to sacred space itself symbolizes and accommodates the transition from one realm to another. Finding physical distinctions between front and rear indicates that social conventions and distinctions are in operation.

## **6. Transformation in artefacts: the emergence of new socio-spatial orders**

The study of transformation in architectural forms and landscape of any period, should deal with time and place and should express traditional, contemporary and future values. Transformation actualizes the modernity of tradition in the context of reconstruction in which ecological, economic, humanistic and cultural concerns are intelligently integrated (Mofti, 1989). By embodying intelligibility and eligibility in physical and spatial forms, individuals in a society create an experiential reality through cognition and perception whereby they can retrieve a description of certain dimensions of their society. The objective of the transformation process is to envision a new and original form for the demands of new physical environments. Although transformation is an important mode that human beings employ, what sets humans apart from other species is their ability to manipulate the environment and thereby make changes to it.

The most notable example of the transformation process at work in Saudi Arabia is the rise and fall of architectural forms and landscape elements due to changes in the socio-political structure of the country. The architectural forms and landscape flourished at a time when there was a dependence on community for subsistence and defense, especially when settlements were subjected to periodic raids from nomadic warriors. When the state became the prominent guardian and the car replaced the animal as a means of transportation and the telegram replaced the warning tower, the nomadic raids were eventually eradicated. Most of the distinctive landmarks which distinguished the skyline of the wilderness and traditional settlements were abandoned and left to decay, and the few that survived ceased to function.

The modern era in Saudi Arabia adopted a variety of new structures to function as landmarks. The function of these landmarks is to improve environmental cognition by building a schemata in the user's sub-conscious, but culturally, they connote status. Rules in architectural psychology govern the cognition and perception of attributes and structure the level of meaning. Perceived meaning represents a captured design experience, and this knowledge can be used as feedback for newly emerging forms. Environmental cognition is a convenient and attractive means of linking the public to a physical environment which lacks uniformity (Sommer, 1997). In these physical environments, it is possible to discern characteristics peculiar to individual areas because of different topographical features, different distribution of urban elements and other natural and human-made conditions, and different historical legacies.

In some cases, older warning and defense towers have been transformed to accommodate modern equipment and have been heightened by wire framed steel tower to serve the same symbolic role as the traditional structures. For example, road markers and warning and defense towers not only serve the practical functions of guidance, surveillance, navigation and ritual purposes but are also of great symbolic importance, a reflection of local development.

The new design of prominent structures include elements both of the indigenous culture and of modern technology which introduced new cultural connotations. As such, a higher socio-spatial order may exist.

The attributes of physical environment serve as a base for architectural language in that they enhance the generation of meaning in different contexts and styles. For example, the communication or electrical tower is considered a spectacular example of modern development. This new tower form has brought together the commodity and modern technology to meet the necessities of contemporary urban life.

## **7. Harmonic entity in urban and architectural forms as a quest**

Recently, there has been a growing recognition of the interplay of physical (climatic, geographic, technological) and non-physical (economic, political, cultural) forces in the design of urban and architectural forms. There has been a new effort to arrive at interpretations of harmonic entity based on symbolic cultural expressions found in architecture, art, religion, and folklore including aspects of culture, popular attitudes, and common experience. This is a vision of urban development which embraces the past and the present and which cuts across political and economic boundaries. When the urban and architectural forms of modern development destroy both the intimate scale of the community and its links with the context, interaction is lost. New visual elements no longer express the relation of the individual to the group or of the group to its surroundings. As opposed to the traditional pattern, the new pattern makes individuals feel insignificant. Designers and planners should give renewed attention to the increasing spatial scale and to the design of harmonious domains.

Architectural and urban forms are valued because they have meaning or significance, which lies in how people perceive them, not in how they actually are. The relationship between certain physical structures and their physical environment defines their domain. The domain may be physically defined by boundaries, objects or changes in physical characteristics. The effects of the way a place is entered, on the perception of its domain, may be emphasized by the significance of the variety, location, and frequency of use of the place or the architectural form. The perception of the urban or architectural form and its domain are found to be positively related to the frequency of use and access. In practice, certain domains are found to elicit strong feelings of security, virtualism, and identity. The concept of a domain is important to environmental designers concerned with the creation of a meaningful and coherent physical environment. The domain is an important determinant of the pattern of interaction among people within the domain of the structure. The domain is the extent of the users' physical and emotional interaction with others. The extent of people's interaction with a structure or a space can be related to psychological needs such as security, identity, and self-actualization. Perception, cognition, emotions, and motivation all affect the interaction. An understanding of this process is essential to the design process.

Domains create a strong association between users and the constructed environment. Such an intimate relationship is central to the collective behavior of a community. While domains are perpetual, the associations that shape them are the result of the social and cultural transformations that the community experiences. Steele (1981) has observed that man's sense of place is the result of physical, social and personal factors. Open-space arrangements, along with prominent structures, help orient people in social space, and in this way clearly influence the extent and form of communication among inhabitants. It has been argued that space organization is the primary function of culture; through space organization, culture both prevents and encourages social interaction (Rapoport, 1990). The characteristics of a traditional settlement include the physical manifestation of the equilibrium between social homogeneity and heterogeneity in a social system requiring both the segregation of domestic life and participation in the economic and religious life of the community. The hierarchy of open spaces in the vernacular settlements of Southwestern Saudi Arabia has provided various domains for a number of activity patterns. Although each activity site is unique in its spatial quality and placement in relation to the settlement, they are all joined in a sequential order that facilitates and supports community life.

Weekly markets and warning and defense towers and vernacular landscape consist of historically accumulated political, ritual, business and commercial functions (Fig. 11). Their domains are places of symbolic importance to both local people and to intruders. They are tools for regional revitalization and can maintain and improve the play of various functions and the preservation of the natural environment. In order to make the vernacular settlements a more attractive and a much more comfortable place in which to live, there is a need for its inhabitants to be fully aware of the characteristics which each of their communities possess and to foster these characteristics in such a way as to preserve the individual identity of the community.



Fig. 11. Weekly markets are one of the most important and active places in living villages.



Fig. 12. Warning and defense towers characterized the landscape of highlands of southwestern Saudi Arabian settlements. Their dominance of the skyline of landscape enhanced the alertness between inhabitants during time of danger.

Local communities would also benefit from a more direct discussion of the conflict between the modern and the traditional. The real tension that exists between the two often has modernization and its promotion of secular values at its root. Modern economic concepts and world trade have created a clash with the traditional way of life.

The vernacular built environment has many rules directly reflected in the contextual relationship among its associated artefacts (Fig. 12). One may suggest that the clear boundary demarcations noticed in the built environment of Islamic communities is a physical expression of the societal concern for privacy. In many settlements, the forms and locations of walls, gates and towers served to designate local socio-spatial hierarchies.

## **8. Harmonic entity: an implication in modern architecture and planning**

In the process of urban and architectural ‘enculturation’, the local dweller learns to place physical structures with names and attributes in the physical environment to the benefit of ‘spatial orientation and navigation’ (Fig. 13). Cultural processes determine the physical characteristics associated with different parts of the environment and what kind of behavior is appropriate to socially recognized places. In this way, the system of place and artefact names and expected behavior imbue the built environment and landscape with social and political meaning. The erection of urban and architectural forms plays a very important role in this process. Their construction helps classify social and economic activities into various relevant domains. The built environment can signify power or status, encode value systems, differentiate between men/women,

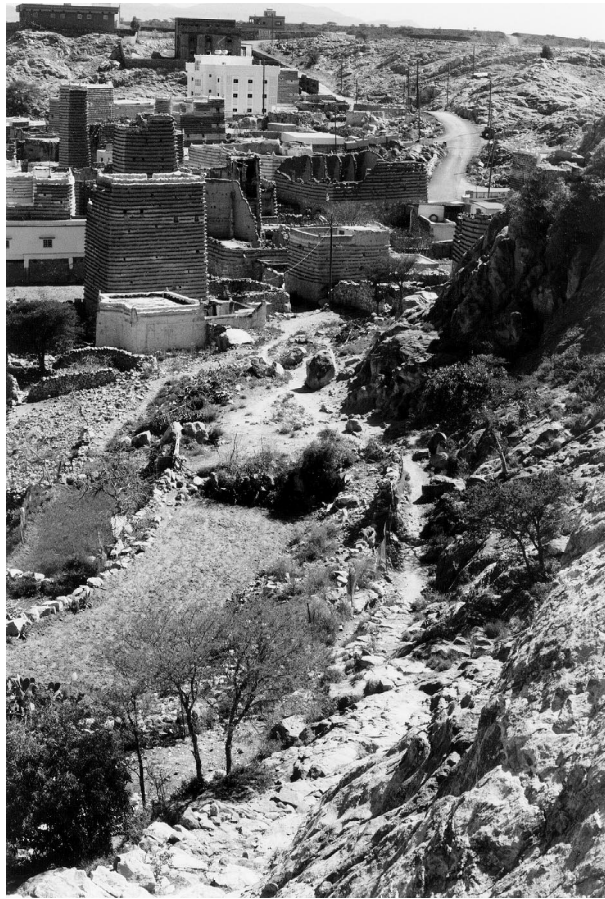


Fig. 13. The Qibla wall of mosques identify the sense of direction in Islamic settlements.

private/public, sacred/profane, front/back and so on (Rapoport, 1990). The physical distinction of space communicates appropriate behavior to the culture and activities of its inhabitants. The physical environment can provide clues to the social and political situation that influences behavior.

The study of the interaction of physical structures and their built environment is able to bridge architecture and planning practices through two lines of implication. Firstly, the perceived architecture and the built form of the artifact, whether the physical structure is affiliated to religious or secular, denotes a way of life. The minaret in a mosque expresses a simple and modest landmark while praying space can express a high regard for ritual. In other words, physical forms do not only express esthetics, but to a great extent reflect religious and social demands. A greater value is therefore given to form and context.

In reviewing traditional physical artefacts, the investigator departed from what has sustained climatic, socioeconomic, political, and security debates throughout the urban history of the vernacular settlements in the highlands of southwestern Saudi Arabia. Islamic artefacts which are

true expressions of the material at hand, environmental conditions, practiced rituals and social demands.

The urban form and landscape of a settlement includes such tangible elements as the urban pattern, architectural character and built and natural form configurations. Intangible elements are defined solely on the underlying basis of the economic base, political system, and religious factors especially the immutables implied by Islam. These are also the generic planning factors that govern the interplay of the open spaces, building forms and building elements in Muslim environs.

Planners and architects might be advised to develop an analytical method of how the spatial arrangement of specific structures influence the interaction process, as a first step in their quest to fully understand the influence of the above factors on the spatial arrangement of built form elements.

The contemporary conception of space in the Muslim world is a reflection of urbanism in the western world (Al-Mubarak, 1995; Al-Hathloul, 1996). The adopted concept of space in contemporary time is completely different from the traditional era concept. This variation has direct implications on the interaction between the new physical structures and the built environment. This is presumably due to the fact that the planning and architectural education in Saudi Arabia is similar to that in the Western world. This influences the way in which contemporary architectural practices performed. Mostly, the contemporary practices do not match indigenous architectural solutions of the past.

Most professional attempts to assimilate traditional flavors have been restricted to the adaptation of traditional physical forms, rather than comprehension of concepts included in the creation of space configuration (Fig. 14). For example, a look at the organization of space in traditional settlements displays the importance of religious, climatic and social factors upon the design and use of space, both inside and out. Urban and physical forms and the character of the traditional



Fig. 14. Since most of the Husns (warning and defense towers) were destroyed in many villages, some were reconstructed in new houses.





Fig. 15. New-vernacular architectural style emerged in Abha. It assimilates the indigenous character of Asir in an attempt to enhance the cognition of the place.

environment are intricately interwoven, presenting a mosaic of physical components. Saudi Arabia's semi-arid climate and its agricultural landscape contributed to the creation of a unique interaction of physical structures with the built environment. In traditional settlement and vernacular landscape, one can observe a keen awareness of the warmth and ingenuity in the design and arrangement of certain physical structures and the built environment.

At present, this type of interaction is threaten by decay. By allowing the destruction of many distinctive physical forms and their built environment, the records of nation and individuals will be entombed. This study may invite (or start) a discussion on how to assimilate some of the traditional principles into current practice. Any attempt to assimilate traditional architecture has to consider the adaptation and creation processes rather than merely imitating the traditional style (Fig. 15).

## 9. Concluding remarks

If one evaluates the traditional physical structures in the built environment and landscape investigated here and compare them to each other it becomes apparent that they share distinct yet common features. They are generally well-planned, attractive, comfortable and healthy structures. The warning and defense tower is neither employed partially nor casually; it is used in its entirety for deliberate spatial effect and is arranged in a particular way. For example, the physical relationship of the minaret to the settlement symbolizes the importance of the mosque and its central role in Islamic society. Likewise, the prominent location of warning and defense towers not

only served a functional purpose, but stressed the significance of common defense as an over-riding part of life in the region. The importance of defense is also reflected in the rituals of the culture where the structures were developed.

The associated meanings embodied in each structure were handled in, and modified through, an interpretative process used by people in dealing with their day-to-day activities. The role of space landmarks as beacons in the harsh environment can not be undervalued. Beyond their identity as general symbols, which may or may not be evident to an outsider, individual warning and defense towers had further meaning to local people because of events that took place at the tower's temporal environment. In this way, towers serve as a device of shared memories and cultural reaffirmation.

Seen from the standpoint of history, archaeological evidence alone is often not enough to establish the meaning of an open weekly market space or a freestanding warning and defense tower. However, by considering the structure within its culture, a fuller, richer meaning often becomes clear. The place where the activity stood was not a matter of chance. It was determined by spatial relationships, cultural associations, and functional considerations which defined the interaction process.

Historical physical structures and their built environments provide real interaction evidenced by built form variations. The identification of architecturally meritorious structures is a major step in successful planning and design. Excellence and aesthetic value in a structure enhances the interaction between it and users. When a new structure promotes a respect for history, it does not necessarily relegate its user to live in the past. While most cultures can retain the traditions and the values honored by their ancestors, they cannot live the same lifestyle. Instead, traditional values can be reflected in character and in life choices. Similarly, Islamic structures should look to the future while being based on the past, and should compete with non-Muslim architecture for design and esthetical qualities. Blindly following international styles leads to a cultural void, and merely imitating traditional architecture cannot do justice to a rich heritage.

The interaction of physical structures and their built environment should not be treated separately from human behavior. The built environment is a function of architecture, an integral part of the design problem to be solved, even though the planning and urban design processes are intangible activities, unlikely to produce visible volumetric elements. It is architecture which refines these activities into an appealing built form. This may leave the impression that urban planners and designers do not need strong architectural skills, but in fact, the opposite is true. There is a need for planners with strong design skills who can spot design deficiencies and define an appropriate solution. The differences between urban planning, urban design and architecture must become merely a matter of complexity, process, public communication, scale and time — not substance.

Planners and architects who look beyond stylistic preferences and prejudices will discover building and space relationships that give the physical form of a structure its identity. Professionals are faced with many different kinds of buildings, styles and architectural motifs to adopt in their attempts to enhance the interaction of the physical structures with their built environment. An exploration of traditional experiences provides an opportunity to expand personal design skills and judgment.

Continuity of tradition needs planning and design regulations and guidelines as well as the establishment of a code of practice to govern and control the proper implications of immutables. The development of residential, commercial, institutional and recreational facilities that allow the

dominance of immutable will produce distinctive designs of regional identity. Through an awareness of cultural values, environmental conditions and geography, an interaction between certain physical structures and the built environment can be achieved. An environment which is characterized by a sense of local authenticity can then be successfully designed.

An assessment of the current state of architectural and urban developments or wilderness will identify a sense of chronology which can contribute to local authenticity. Symbol formation can provide an urban and architectural vocabulary that can help in solving space and place identity problems.

## References

- Al-Hathloul, S. (1996). *The arab-muslim city: Tradition, continuity and change in the physical environment*. Riyadh: Dar Al Sahan.
- Al-Mubarak, F. A. (1995). Oil, urban development and planning in the eastern province of Saudi Arabia: The case of the Arab American Oil Company, 1930–1970s. A paper presented in Planning Historians Conference, Knoxville, TN.
- Al-Soliman, T. M. (1990). The impact of the surrounding environment on people's perception of major urban environmental attributes. *Journal of King Saud University. Architecture and Planning*, 2, 43–60.
- Curran, R. J. (1983). *Architecture and the urban experience*. New York: Van Nostrand Reinhold.
- Lang, J. (1988). Symbolic aesthetics in architecture: Toward a research agenda. In J. L. Nasar, *Environmental aesthetics; theory, research & applications*. Cambridge, England: Cambridge University Press.
- Mofti, F. A. (1989). Transformations in the built environment in Saudi Arabia. *Urban Futures*, 2(4), 17–26.
- Pocock, D., & Hudson, R. (1978). *Images of the Urban Environment*. London: Macmillan.
- Rapoport, A. (1990). *History and Precedent in Environmental Design*. New York: Plenum.
- Sommer, R. (1997). Benchmarks in Environmental psychology. *Environmental Psychology*, 17(1), 1–10.
- Steele, F. (1981). *The sense of place*. Boston: CBI.
- Wood, J. E. (1978). *Sun, moon and standing stones*. Oxford: Oxford University Press.